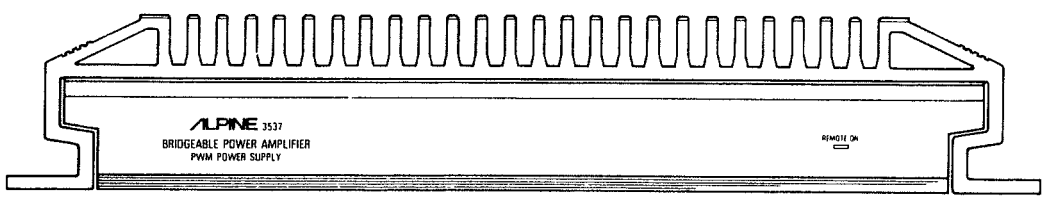
ALPINE SERVICE MANUAL

75

BRIDGEABLE

POWER AMPLIFIER



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Specifications

1. 4 ohms 2-channel stereo mode

Power Output (1 kHz, 8% THD)	100 W/CH
Rated Power Output (20 Hz ~ 20 kHz, 0.1% THD)	80 W/CH
Input Sensitivity (Rated Power Output)	Fix. 500 mV ± 10% Var. 100 mV ± 30%, 2 V ± 30%
T.H.D (at 80 W Power Output, 20 Hz to 20 kHz)	0.08%
Frequency Response (–1 dB at 1 W Output)	20 Hz to 20 kHz
Current Drain (Rated Power Output)	30 A
Channel Separation (at 1 kHz)	60 dB
Signal to Noise Ratio (IHF-A, at Rated Power Output)	100 dB
Speaker Impedance	4 ohms

2. 2 ohms 2-channel stereo mode

Power Output (1 kHz, 8% THD)	110 W/CH
Rated Power Output (20 Hz ~ 20 kHz, 0.1% THD)	80 W/CH
T.H.D (at 80 W Power Output, 20 Hz to 20 kHz)	0.1%
Frequency Response (–1 dB at 1 W Output)	20 Hz to 20 kHz
Current Drain (Rated Power Output)	35 A
Signal to Noise Ratio (IHF-A, at Rated Power Output)	100 dB
Speaker Impedance	2 ohms

3. 4 ohms BTL mono mode

Power Output (1 kHz, 8% THD)	220 W/CH
Rated Power Output (20 Hz ~ 20 kHz, 0.1% THD)	110 W/CH
T.H.D (at 160 W Power Output, 20 Hz to 20 kHz)	0.08%
Frequency Response (–1 dB at 1 W Output)	20 Hz to 20 kHz
Current Drain (160 W Power Output)	35 A
Speaker Impedance	4 ohms

4. General

Fuse Requirement	30 A (Battery) 3 A (ACC) 3 A (Battery)
Power Source	14.4 V DC
Semiconductors	4 ICs, 51 Transistors, 29 Diodes, 10 Zener Diodes
Dimensions (WxHxD)	300 x 55 x 200 mm
Weight	3.4 kg

Parts Locations and Disassembly Instructions

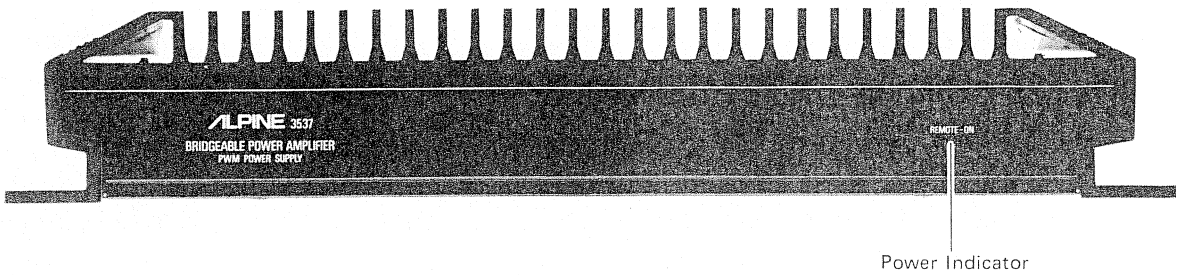


Figure 1

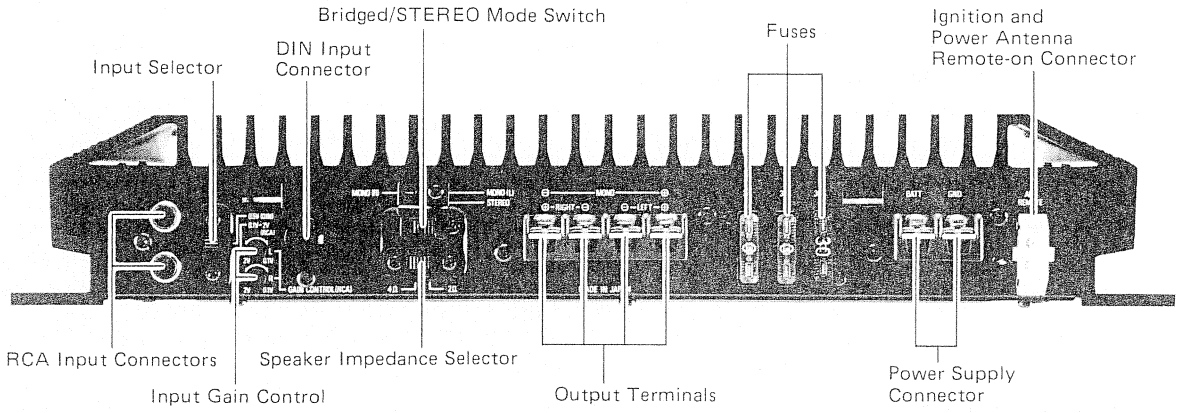


Figure 2

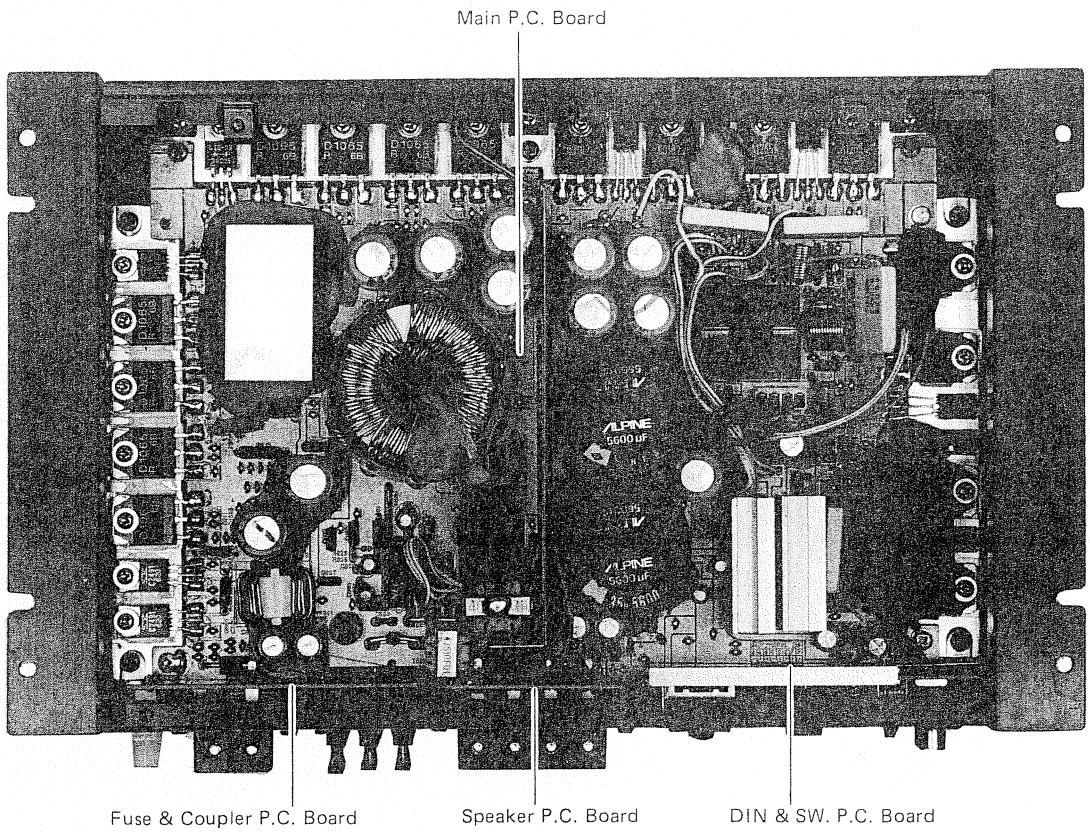


Figure 3

1. Removal of Bottom Cover

(1) Remove five screws marked "○" in Figure 4.

2. Removal of Heat Sink, Front Chassis and LED P.C.B

(1) After removal of bottom cover, remove eleven screws marked "□" in Figure 5.
(2) Disconnect the connector from LED P.C.B.
(3) Remove heat sink with front chassis and LED P.C.B.

3. Removal of Fuse & Coupler P.C.B, Speaker P.C.B, and DIN & SW P.C.B

(1) After removal of bottom cover, heat sink, remove two screws marked "☆" in Figure 6.
(2) Remove fourteen screws marked "△" in Figure 4.
(3) Remove solder (a, b) of Fuse & Coupler P.C.B, Speaker P.C.B, and DIN & SW P.C.B.
(4) Disconnect two connectors from there P.C.B.
(5) Fuse & Coupler P.C.B, Speaker P.C.B, DIN & SW P.C.B with Rear Cover can be removed completely.

4. Removal Main P.C.B

(1) After removal of Fuse & Coupler P.C.B, Speaker P.C.B, and DIN & SW P.C.B, remove solder (c ~ f) as shown in Figure 7.
(2) Remove four screws marked "■" in Figure 7.

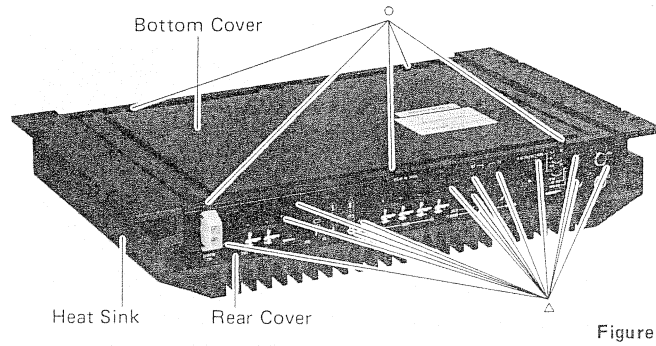


Figure 4

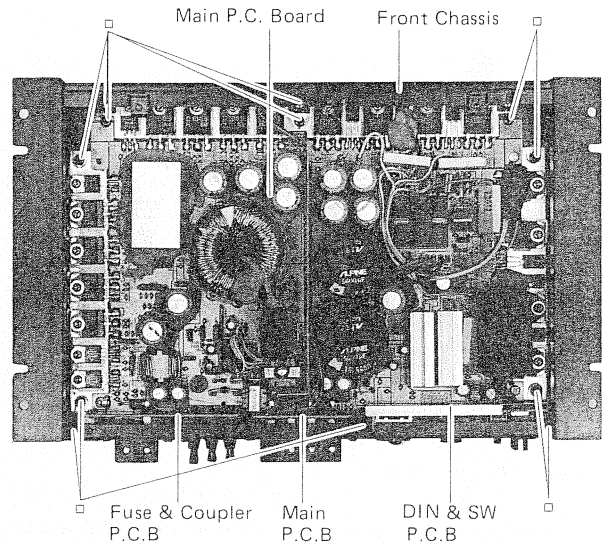
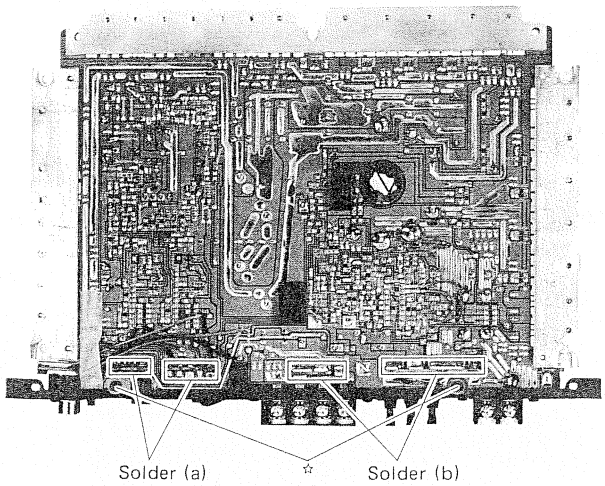


Figure 5



Fgiure 6

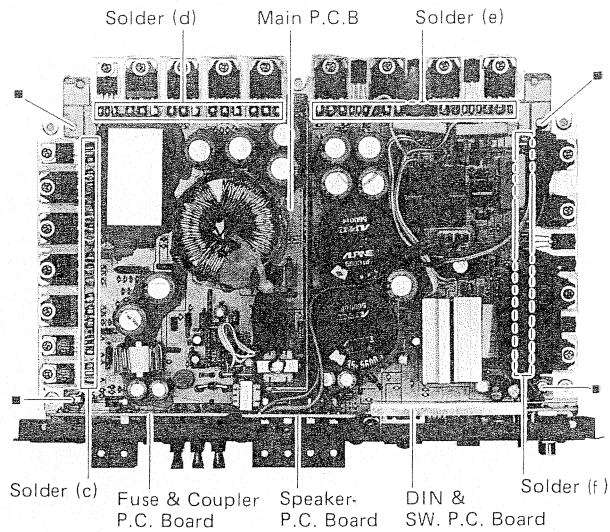


Figure 7

Adjustment Procedures

- **Power Supply Voltage Adjustment**

(1) Connections

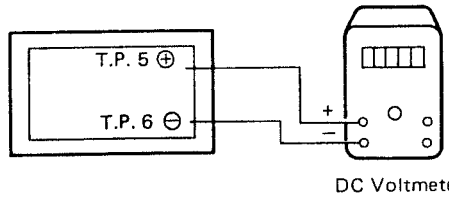


Figure 8

(2) Adjustment Procedures

Adjust solid-state variable resistor VR801 to obtain 66 ± 0.5 V (between T.P. 5 and T.P. 6) on the DC voltmeter.

- **Idle Current Adjustment**

(1) Connections

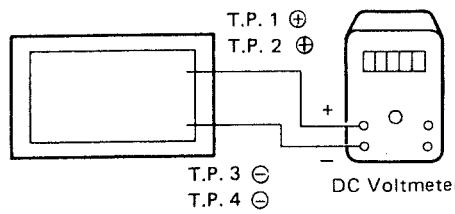


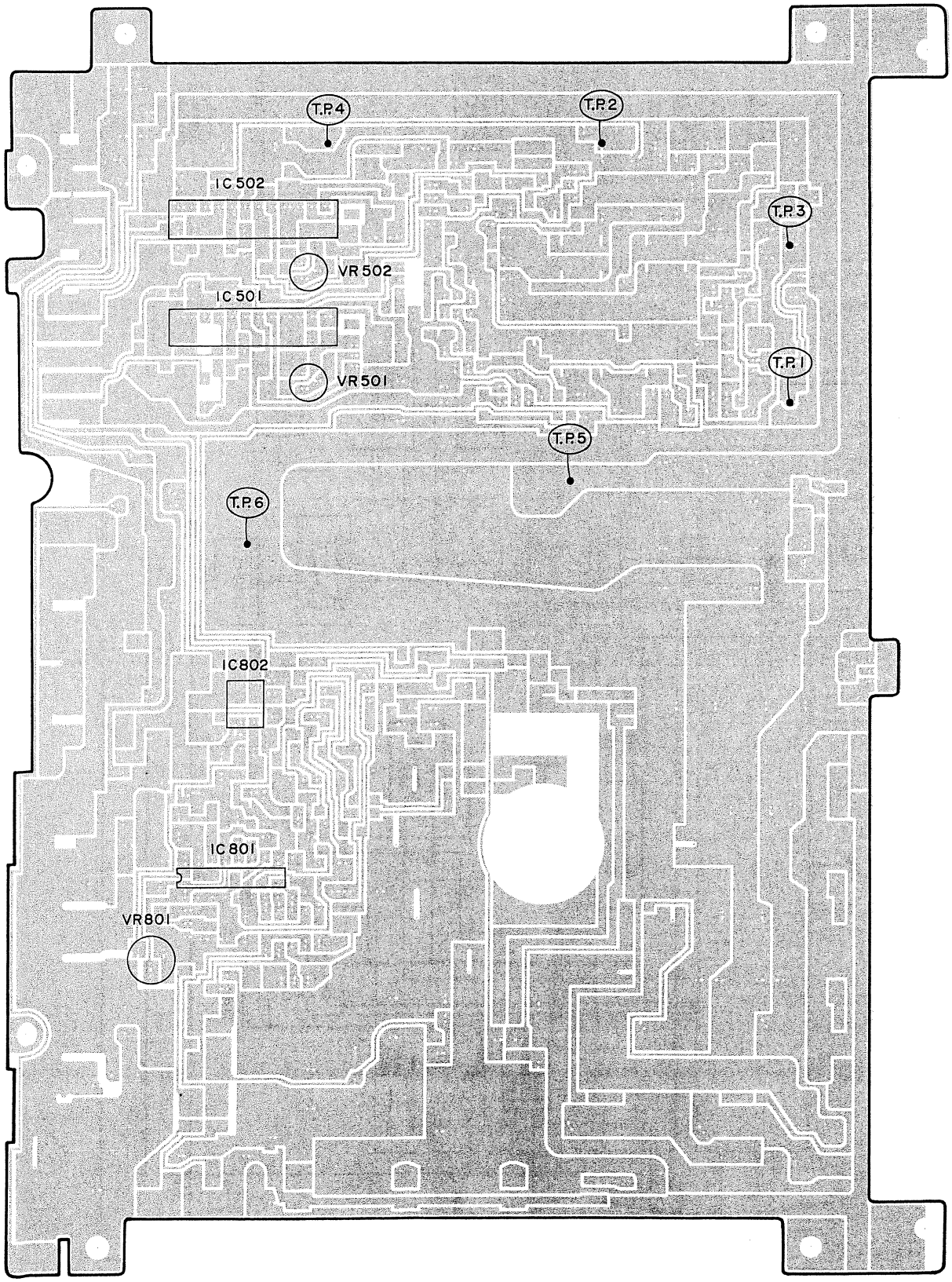
Figure 9

(2) Adjustment Procedures

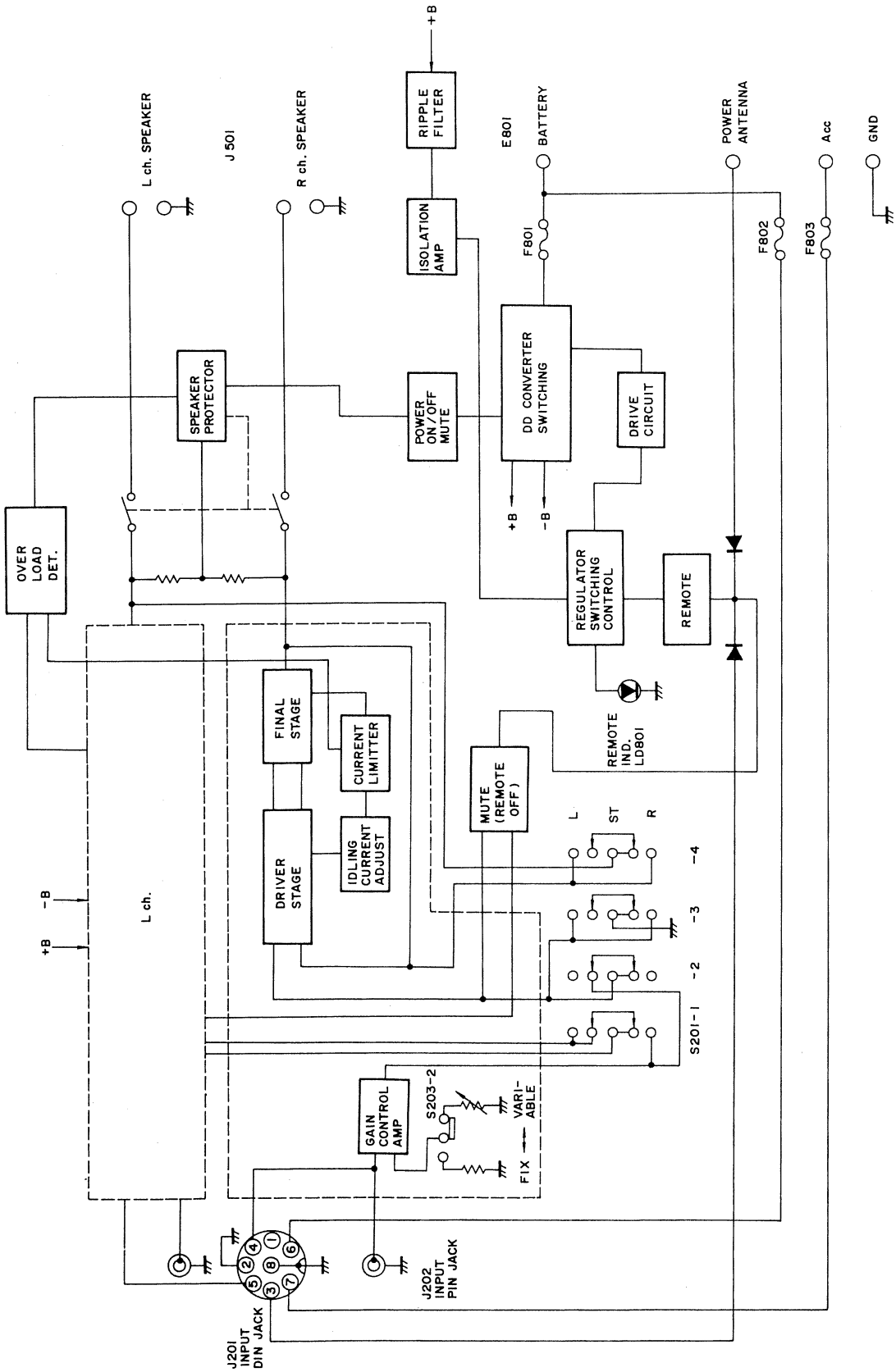
Adjust the solid-state variable resistor VR501 to obtain 10 ± 1 mV (between T.P. 1 and T.P. 3) on the DC voltmeter. In the same manner, adjust the VR502 to also obtain 10 ± 1 mV (between T.P. 2 and T.P. 4) on the DC voltmeter.

- Idle current = 5 ± 1 (mV) ÷ 0.2 (ohm) = 50 ± 5 (mA)

Adjustment Locations



Block Diagram



Schematic Diagram

ICs	IC501 IC502 IC201
Transistors	Q580 Q590–Q592 Q581 Q501–Q506 Q593 Q594 Q516–Q523 Q507–
Diodes	D581 D580 D594 D591–D593 ZD590 D595 D511 D501–D504 D505–D508

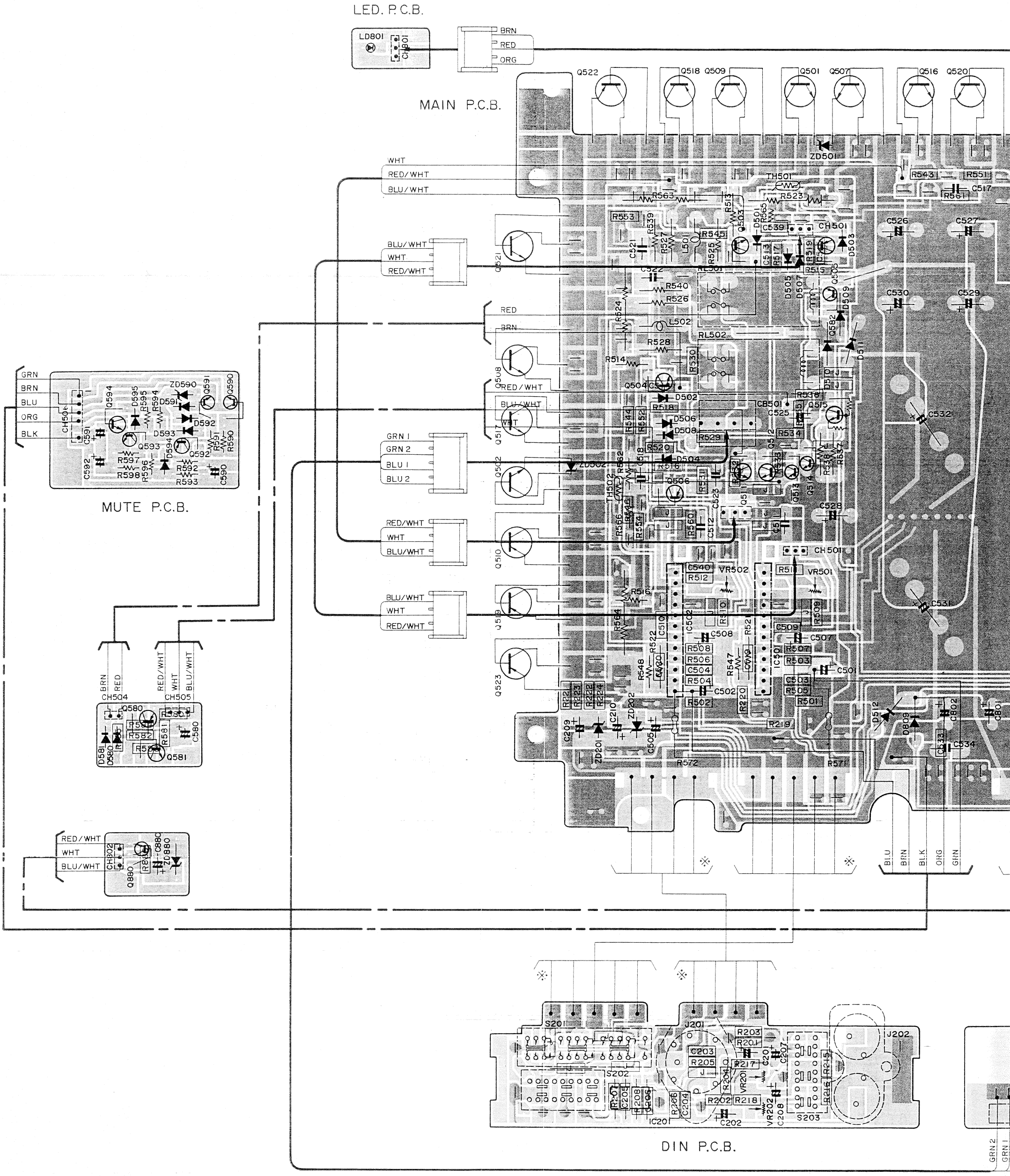
Voltage Measuring Conditions
- **Power supply voltage:** DC 14.4V
- **Measuring instrument:** Digital multi voltmeter
- **Measuring point reference:**
  Power supply . . . . . Primary GND
  Amplifier . . . . . Secondary GND
- **Measuring conditions:** No signal and initial settings

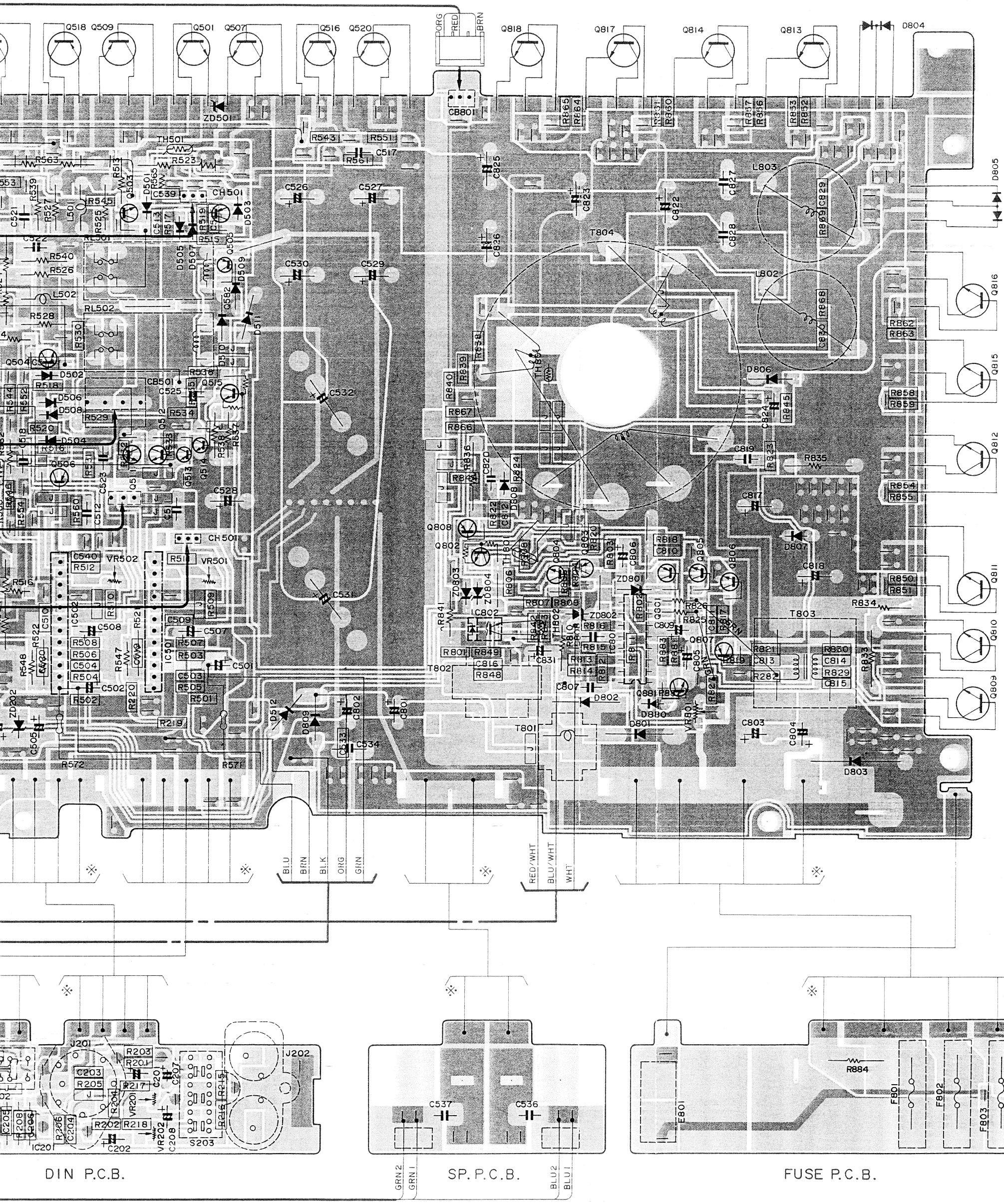
⑧	SHIELD GROUND
⑦	+B ACC
⑥	+B BATTERY
⑤	SIGNAL LEFT IN
④	SIGNAL RIGHT IN
③	+B FOR REMOTE
②	SIGNAL GROUND
①	N C

| | | |

| | | |

Wiring Diagram and Parts Layout on P.C. Board




Q518 Q509 Q501 Q507 Q516 Q520 Q818 Q817 Q814 Q813 D804
ORG RED BRN
CB801
ZD501
TH501
R563 R523 R543 R551 R561 C517
C526 C527 C530 C529 C532 C531 C528
C825 C823 C822 C827 C826 C828
L803 T804 L802
D805 D806 D807 D803
Q816 Q815 Q812 Q811 Q810 Q809
R865 R864 R831 R830 R817 R816 R833 R832
R868 R867 R866 R839 R840 R838 R836 R837 R824 R822 R820 R841 R842 R843 R844 R845 R846 R847 R848 R849 R850 R851 R852 R853 R854 R855 R858 R859 R862 R863
C830 C829 C824 C819 C817 C818 C812 C808 C802 C801 C831 C816 C807 C809 C805 C804 C803 C814 C815
TH802 TH801 TH803 TH804
ZD803 ZD804 ZD801 ZD802
Q808 Q802 Q804 Q803 Q806 Q805 Q807 Q801
T802 T801
D809 D512 D802 D801 D810
R835 R834 R826 R825 R821 R819 R813 R814 R815 R816 R810 R811 R812 R803 R804 R807 R809 R801 R841 R842 R843 R844 R282
C813 C810 C806 C831
R830 R829
T803
R884
F801 F802 F803
E801
CB501
C525 C535
D502 D506 D508 D504 D505 D507 D509 D510 D511 D503
R518 R544 R552 R529 R520 R516 R554 R560 R512 R508 R506 R504 R502 R509 R507 R505 R503 R501 R510 R511 R513 R514 R515 R517 R519 R521 R523 R525 R527 R528 R530 R531 R532 R533 R534 R535 R536 R537 R538 R539 R540 R543 R545 R547 R548 R549 R550 R551 R553 R555 R556 R557 R558 R559 R561 R562 R563 R564 R565 R566 R567 R568 R569 R570 R571 R572 R219 R220
C540 C512 C523 C522 C521 C520 C519 C518 C517 C516 C515 C514 C513 C510 C509 C508 C507 C506 C505 C504 C503 C502 C501 C539
VR502 VR501
IC502 IC501
Q504 Q505 Q502 Q503 Q506 Q513 Q514 Q512
RL502 RL501
ZD202
CH501
L502 L501
BLU BRN BLK ORG GRN
RED/WHT BLU/WHT WHT
J201 J202
R203 R201 C203 R205 R217 C201 C207 R204 VR201 R215 R206 C204 R208 C205 R202 R218 C202 VR202 C208 S203 IC201
C537 C536
GRN 2 GRN 1 BLU 2 BLU 1
DIN P.C.B.
SP. P.C.B.
FUSE P.C.B.

Electrical Parts List

Resistors: Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.
u = microfarads, P = picofarad, CP = chip.

Symbol No.	Part No.	Description
Main P. C. Board		
ICs		
IC801	51T71049F01	TL494CN
or	51T70759F01	uPC494C
IC802	51T70760F01	Photo coupler PS2401-1
Transistors		
Q503	48T81066F01	2SC1615
Q504	48T81066F01	2SC1615
Q505	48T63086F01	2SA937M
Q506	48T63086F01	2SA937M
Q511	48T51091F01	2SC2021
Q512	48T51091F01	2SC2021
Q513	48T63086F01	2SA937M
Q514	48T57337F01	2SD1330
Q515	48T62963F02	DTC114
Q580	48T81069F01	2SB1076
Q581	48T57337F01	2SD1330
Q582	48T62962F06	DTA114Y
Q801	48T69177F01	2SA1358
Q802	48T62540F01	UN1211
Q803	48T63086F01	2SA937M
Q804	48T51091F01	2SC2021
Q805	48T51091F01	2SC2021
Q806	48T51091F01	2SC2021
Q807	48T63086F01	2SA937M
Q808	48T63086F01	2SA937M
Q880	48T51091F01	2SC2021
Q881	48T51091F01	2SC2021
Diodes		
D501	48T70933F01	1SS136
D502	48T70933F01	1SS136
D503	48T58583F01	SS176TPA7
or	48T68828F01	1SS133
D504	48T58583F01	SS176TPA7
or	48T68828F01	1SS133
D505	48T58583F01	SS176TPA7
or	48T68828F01	1SS133
D506	48T58583F01	SS176TPA7
or	48T68828F01	1SS133
D507	48T58583F01	SS176TPA7
or	48T68828F01	1SS133
D508	48T58583F01	SS176TPA7
or	48T68828F01	1SS133
D509	48S40477U01	IN4003
D510	48S40477U01	IN4003
D511	48C40235G02	10E2
D512	48S40477U01	IN4003
D580	48T58583F01	SS176TPA7
or	48T68828F01	1SS133
D581	48T58583F01	SS176TPA7
or	48T68828F01	1SS133
D801	48T68580F03	DSA3A4-F5
D802	48T68580F03	DSA3A4-F5
D803	48T68079F03	30D4 FA
D806	48T58593F01	GFD 10-E G
D807	48T58583F01	SS176TPA7
or	48T68828F01	1SS133
D808	48T58583F01	SS176TPA7
or	48T68828F01	1SS133
D809	48S40477U01	IN4003
D880	48T58583F01	SS176TPA7
or	48T68828F01	1SS133
ZD201	48T68697F56	Zener HZS 16EB3
or	48T68699F48	Zener MTZ 16-C
ZD202	48T68697F56	Zener HZS 16EB3
or	48T68699F48	Zener MTZ 16-C
ZD501	48T40150U09	Zener HZ3C-3
ZD502	48T40150U09	Zener HZ3C-3
ZD801	48T68697F03	Zener HZS 3EB1
ZD802	48T68697F66	Zener HZS 22EB3
or	48T68699F59	Zener MTZ 22-D
ZD803	48T68697F71	Zener HZS 24EB4
or	48T68699F63	Zener MTZ 24-D
ZD804	48T68697F43	Zener HZS 11EB2
or	48T68699F36	Zener MTZ 11-C
ZD880	48T68697F43	Zener HZS 11EB2
or	48T68699F36	Zener MTZ 11-C

Symbol No.	Part No.	Description
Coils		
L501	24T74372F01	Choke 1.1uH
L502	24T74372F01	Choke 1.1uH
L802	25T73270F01	Choke 100uH
L803	25T73270F01	Choke 100uH
T801	25T47510F01	Choke, Filter (EI-14)
T802	25C40894G11	Choke, Trans
or	25T71689F01	Choke, Filter (EI-19)
T803	25T73271F01	Choke, Common 3537
Volume Controls		
VR501	18T45040F05	Variable 470 ohms
VR502	18T45040F05	Variable 470 ohms
VR801	18B44064J02	Variable 4.7k ohms
Thermistors		
TH501	48T60670F01	20k ohms
TH502	48T60670F01	20k ohms
TH802	48T60670F01	20k ohms
Relays		
RL501	80T70844F01	G5R-2232P-12V
RL502	80T70844F01	G5R-2232P-12V
Capacitors		
C209	23S40657F21	Electrolytic 100u 25V
C210	23S40657F21	Electrolytic 100u 25V
C501	23T42478F09	Electrolytic 4.7u 50V
C502	23T42478F09	Electrolytic 4.7u 50V
C503	08S53332F32	CP. 560P
C504	08S53332F32	CP. 560P
C505	23T65374F12	Electrolytic 100u 35V
C507	23S40657F11	Electrolytic 22u 16V
C508	23S40657F11	Electrolytic 22u 16V
C509	08S53332F17	CP. 33P
C510	08S53332F17	CP. 33P
C511	08T57705F75	Mylar 0.047u
C512	08T57705F75	Mylar 0.047u
C513	08S53332F35	CP. 1000P
C514	08S53332F35	CP. 1000P
C515	08S53332F35	CP. 1000P

Symbol No.	Part No.	Description
C516	08S53332F35	CP. 1000P
C517	08T57705F75	Mylar 0.047u
C518	08T57705F75	Mylar 0.047u
C519	08S53332F11	CP. 10P
C520	08S53332F11	CP. 10P
C521	08T57705F75	Mylar 0.047u
C522	08T57705F75	Mylar 0.047u
C523	23S41192U68	Electrolytic 100u 10V B.P.
C525	23T65374F06	Electrolytic 220u 16V
C526	23T69238F02	Electrolytic 1800u 35V
C527	23T69238F02	Electrolytic 1800u 35V
C528	23T69238F02	Electrolytic 1800u 35V
C529	23T69238F02	Electrolytic 1800u 35V
C530	23T69238F02	Electrolytic 1800u 35V
C531	23T73116F01	Electrolytic 5600u 35V
C532	23T73116F01	Electrolytic 5600u 35V
C533	08S53332F51	CP. 0.022m
C534	08T50579F21	TF. 0.47m
C539	08S53332F31	CP. 470P
C540	08S53332F31	CP. 470P
C580	23T73862F06	Electrolytic 100u 16V
C801	23C42170G30	Electrolytic 470u 16V
C802	23C42170G30	Electrolytic 470u 16V
C803	23T51232F02	Electrolytic 1000u 16V
C804	23T51232F02	Electrolytic 1000u 16V
C805	23S40657F10	Electrolytic 10u 16V
C806	23T65374F02	Electrolytic 220u 10V
C807	08T57705F79	Mylar O.1u
C808	08T57705F55	Mylar 1000P
C809	23S40657F10	Electrolytic 10u 16V
C810	08S53332F23	CP. 100P
C811	08S53332F23	CP. 100P
C812	08S53332F23	CP. 100P
C813	08S53332F23	CP. 100P
C814	08S53332F35	CP. 1000P
C815	08S53332F35	CP. 1000P
C816	08S53332F35	CP. 1000P
C817	23C42170G37	Electrolytic 3300u 16V
C818	23C42170G37	Electrolytic 3300u 16V
C819	08T57851F05	TF 0.022u
C820	08T57851F05	TF 0.022u

Symbol No.	Part No.	Description
C822	23T69238F02	Electrolytic 1800u 35V
C823	23T69238F02	Electrolytic 1800u 35V
C824	23S40657F10	Electrolytic 10u 16V
C825	23T69238F02	Electrolytic 1800u 35V
C826	23T69238F02	Electrolytic 1800u 35V
C829	08S53332F35	CP. 1000P
C830	08S53332F35	CP. 1000P
C831	23T65374F04	Electrolytic 47u 16V
C880	23S57422F15	Electrolytic 47u 16V
Resistors		
R219	06S53330F97	CP. 68k ohms 1/8W
R220	06S53330F53	CP. 1K ohms 1/8W
R221	06T70072F57	CP. 1.5k ohms 1/4W
R222	06T70072F57	CP. 1.5k ohms 1/4W
R223	06T70072F57	CP. 1.5k ohms 1/4W
R224	06T70072F57	CP. 1.5k ohms 1/4W
R501	06S53330F79	CP. 12k ohms 1/8W
R502	06S53330F79	CP. 12k ohms 1/8W
R503	06S53330F61	CP. 2.2k ohms 1/8W
R504	06S53330F61	CP. 2.2k ohms 1/8W
R505	06S53330F93	CP. 47k ohms 1/8W
R506	06S53330F93	CP. 47k ohms 1/8W
R507	06S53330F77	CP. 10k ohms 1/8W
R508	06S53330F77	CP. 10k ohms 1/8W
R509	06S53330F59	CP. 1.8k ohms 1/8W
R510	06S53330F59	CP. 1.8k ohms 1/8W
R511	06S53330F41	CP. 330 ohms 1/8W
R512	06S53330F41	CP. 330 ohms 1/8W
R515	06S53330F49	CP. 680 ohms 1/8W
R517	06S53330F81	CP. 15k ohms 1/8W
R518	06S53330F81	CP. 15k ohms 1/8W
R519	06S53330F81	CP. 15k ohms 1/8W
R520	06S53330F81	CP. 15k ohms 1/8W
R523	06T51107F02	Cement 0.1 ohms 5W
R524	06T51107F02	Cement 0.1 ohms 5W
R525	06T67581F12	Carbon Film 22 ohms 1/2W
R526	06T67581F12	Carbon Film 22 ohms 1/2W
R527	06T67581F12	Carbon Film 22 ohms 1/2W
R528	06T67581F12	Carbon Film 22 ohms 1/2W
R529	06S53330F79	CP. 12k ohms 1/8W
R530	06S53330F79	CP. 12k ohms 1/8W
R531	06S53330F53	CP. 1k ohms 1/8W
R532	06S53330F65	CP. 3.3k ohms 1/8W
R533	06S53330F77	CP. 10k ohms 1/8W
R534	06S53330F77	CP. 10k ohms 1/8W
R535	06S53330F89	CP. 33k ohms 1/8W
R536	06S53331F06	CP. 150k ohms 1/8W
R537	06T67581F18	Carbon Film 68 ohms 1/2W
R538	06T67581F22	Carbon Film 150 ohms 1/2W
R539	06T67581F12	Carbon Film 22 ohms 1/2W
R540	06T67581F12	Carbon Film 22 ohms 1/2W
R543	06S53330F05	CP. 10 ohms 1/8W
R544	06S53330F05	CP. 10 ohms 1/8W
R545	06S53330F05	CP. 10 ohms 1/8W
R546	06S53330F05	CP. 10 ohms 1/8W
R551	06S53330F05	CP. 10 ohms 1/8W
R552	06S53330F05	CP. 10 ohms 1/8W
R553	06S53330F05	CP. 10 ohms 1/8W
R554	06S53330F05	CP. 10 ohms 1/8W
R561	06S53330F17	CP. 33 ohms 1/8W
R563	06T51107F02	Cement 0.1 ohms 5W
R564	06T51107F02	Cement 0.1 ohms 5W
R580	06S53330F77	CP. 10k ohms 1/8W
R581	06S53330F77	CP. 10k ohms 1/8W
R582	06S53330F45	CP. 470 ohms 1/8W
R583	06S53330F77	CP. 10k ohms 1/8W
R584	06S53330F53	CP. 1k ohms 1/8W
R585	06S53331F02	CP. 100k ohms 1/8W
R801	06S53330F77	CP. 10k ohms 1/8W
R802	06S53330F65	CP. 3.3k ohms 1/8W
R803	06S53330F53	CP. 1k ohms 1/8W
R804	06S53330F77	CP. 10k ohms 1/8W
R805	06S53331F19	CP. 510k ohms 1/8W

Symbol No.	Part No.	Description
R806	06S53330F77	CP. 10k ohms 1/8W
R807	06S53330F84	CP. 20k ohms 1/8W
R808	06S53330F37	CP. 220 ohms 1/8W
R809	06S53330F84	CP. 20k ohms 1/8W
R811	06S53330F76	CP. 9.1k ohms 1/8W
R812	06S53331F02	CP. 100k ohms 1/8W
R813	06S53330F96	CP. 62k ohms 1/8W
R814	06S53330F60	CP. 2k ohms 1/8W
R815	06S53330F77	CP. 10k ohms 1/8W
R816	06S53330F83	CP. 18k ohms 1/8W
R817	06S53330F94	CP. 51k ohms 1/8W
R818	06S53330F94	CP. 51k ohms 1/8W
R819	06S53330F70	CP. 5.1k ohms 1/8W
R820	06S53330F70	CP. 5.1k ohms 1/8W
R821	06S53330F94	CP. 51k ohms 1/8W
R822	06S53330F94	CP. 51k ohms 1/8W
R823	06S53330F70	CP. 5.1k ohms 1/8W
R824	06S53330F70	CP. 5.1k ohms 1/8W
R827	06S53330F47	CP. 560 ohms 1/8W
R828	06S53330F47	CP. 560 ohms 1/8W
R829	06S53330F26	CP. 75 ohms /8W
R830	06S53330F26	CP. 75 ohms /8W
R833	06T55175F17	Metal Film 10 ohms 1/2W
R834	06T55175F17	Metal Film 10 ohms 1/2W
R835	06T55177F17	Metal Film 10 ohms 1W
R836	06T55177F17	Metal Film 10 ohms 1W
R838	06S53330F59	CP. 1.8k ohms 1/8W
R839	06S53330F59	CP. 1.8k ohms 1/8W
R840	06S53330F59	CP. 1.8k ohms 1/8W
R842	06S53330F69	CP. 4.7k ohms 1/8W
R843	06S53330F46	CP. 510 ohms 1/8W
R844	06S53330F50	CP. 750 ohms 1/8W
R845	06S53330F77	CP. 10k ohms 1/8W
R848	06S53330F61	CP. 2.2k ohms 1/8W
R849	06S53331F06	CP. 150k ohms 1/8W
R850	06T70072F78	CP. 2.2 ohms 1/4W
R851	06T70072F78	CP. 2.2 ohms 1/4W
R852	06T70072F78	CP. 2.2 ohms 1/4W
R853	06T70072F78	CP. 2.2 ohms 1/4W
R854	06T70072F78	CP. 2.2 ohms 1/4W
R855	06T70072F78	CP. 2.2 ohms 1/4W
R856	06T70072F78	CP. 2.2 ohms 1/4W
R857	06T70072F78	CP. 2.2 ohms 1/4W
R858	06T70072F78	CP. 2.2 ohms 1/4W
R859	06T70072F78	CP. 2.2 ohms 1/4W
R860	06T70072F78	CP. 2.2 ohms 1/4W
R861	06T70072F78	CP. 2.2 ohms 1/4W
R862	06T70072F78	CP. 2.2 ohms 1/4W
R863	06T70072F78	CP. 2.2 ohms 1/4W
R864	06T70072F78	CP. 2.2 ohms 1/4W
R865	06T70072F78	CP. 2.2 ohms 1/4W
R866	06S53330F50	CP. 750 ohms 1/8W
R867	06S53330F50	CP. 750 ohms 1/8W
R868	06S53330F43	CP. 390 ohms 1/8W
R869	06S53330F43	CP. 390 ohms 1/8W
R880	06S53330F77	CP. 10k ohms 1/8W
R881	06S53330F53	CP. 1k ohms 1/8W
R882	06S53330F53	CP. 1k ohms 1/8W
R883	06S53330F70	CP. 5.1k ohms 1/8W

DIN & Switch P. C. Board

Capacitors

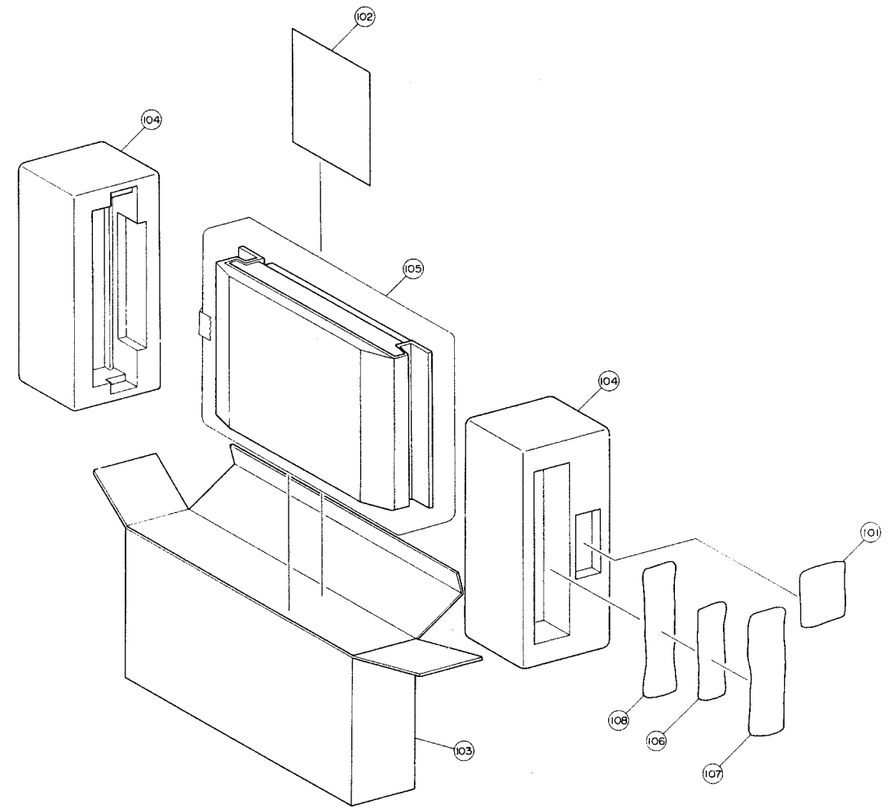
C201	23T42478F24	Electrolytic 1u 50V
C202	23T42478F24	Electrolytic 1u 50V
C203	08S53332F27	CP. 220P
C204	08S53332F27	CP. 220P
C205	08S53332F23	CP. 100P
C206	08S53332F23	CP. 100P
C207	23T61524F03	Electrolytic 100u 4V
C208	23T57007F19	Electrolytic 100u 4V
C536	08T57851F05	TF 0.022u
C537	08T57851F05	TF 0.022u

Resistors

R201	06S53330F53	CP. 1k ohms 1/8W
R202	06S53330F53	CP. 1k ohms 1/8W
R203	06S53330F77	CP. 10k ohms 1/8W
R204	06S53330F77	CP. 10k ohms 1/8W
R205	06S53331F02	CP. 100k ohms 1/8W
R206	06S53331F02	CP. 100k ohms 1/8W
R207	06S53330F75	CP. 8.2k ohms 1/8W
R208	06S53330F75	CP. 8.2k ohms 1/8W
R215	06S53330F60	CP. 2k ohms 1/8W
R216	06S53330F60	CP. 2k ohms 1/8W
R217	06S53330F41	CP. 330 ohms /8W
R218	06S53330F41	CP. 330 ohms /8W

Symbol No.	Part No.	Description
IC		
IC201	51T73087F01	NJM2068D
Volume Controls		
VR201	18T74439F15	Variable 22k ohms
VR202	18T74439F15	Variable 22k ohms
Switches		
S201	40T73274F01	Slide SSA-063
S202	40T73273F01	Slide SSA-062
S203	40T73273F01	Slide SSA-062
Resistor		
R844	06T81067F01	CS. 0.1 ohms 1W
Mute P. C. Board		
Transisitors		
Q590	48T57305F01	2SD1302
Q591	48T57305F01	2SD1302
Q592	48T63086F01	2SA937M
Q593	48T51091F01	2SC2021
Q594	48T51091F01	2SC2021
Diodes		
D591	48T68828F01	1SS133
D592	48T68828F01	1SS133
D593	48T68828F01	1SS133
D594	48T68828F01	1SS133
D595	48T68828F01	1SS133
ZD590	48T68697F01	Zener HZS2.7EB1
Capacitors		
C590	23S61523F12	Electrolytic 10u 16V
C591	23T73862F06	Electrolytic 100u 16V
C592	23T73862F06	Electrolytic 100u 16V
Miscellanues Parts		
ICs		
IC501	51T58602F01	uPC1225H
IC502	51T58602F01	uPC1225H
Transistors		
Q501	48T64376F01	2SC3423
Q502	48T64376F01	2SC3423
Q507	48T58609F01	2SC3182
Q508	48T58609F01	2SC3182
Q509	48T58610F01	2SA1265
Q510	48T58610F01	2SA1265
Q516	48T69176F01	2SC3421
Q517	48T69176F01	2SC3421
Q518	48T69177F01	2SA1358
Q519	48T69177F01	2SA1358
Q520	48T58609F01	2SC3182
Q521	48T58609F01	2SC3182
Q522	48T58610F01	2SA1265
Q523	48T58610F01	2SC1265
Q809	48T69193F01	2SC2491
Q810	48T69193F01	2SC2491
Q811	48T47613F01	2SD1065
Q812	48T47613F01	2SD1065
Q813	48T47613F01	2SD1065
Q814	48T47613F01	2SD1065
Q815	48T47613F01	2SD1065
Q816	48T47613F01	2SD1065
Q817	48T47613F01	2SD1065
Q818	48T47613F01	2SD1065
Diodes		
D804	48T61597F01	CTG22S
D805	48T61597F02	CTG22R
Coil		
T804	25T73272F01	Trans, DC-DC Cont
Thermistor		
TH801	48T60670F01	20k ohms
Others		
E801	01T74571F01	Assy, Coupler 2P
F801	65T58596F08	Fuse Auto 30A
F802	65T58596F01	Fuse Auto 3A
F803	65T58596F01	Fuse Auto 3A
J201	09T70752F01	Soket, DIN 8P
J202	09T70753F01	Jack, RCA 2P
J501	29T73269F01	Terminal Block 4P
J801	29T73268F01	Terminal Block 2P
LD801	48T52238F02	LED, PR5552K (RED)

Packing Method View

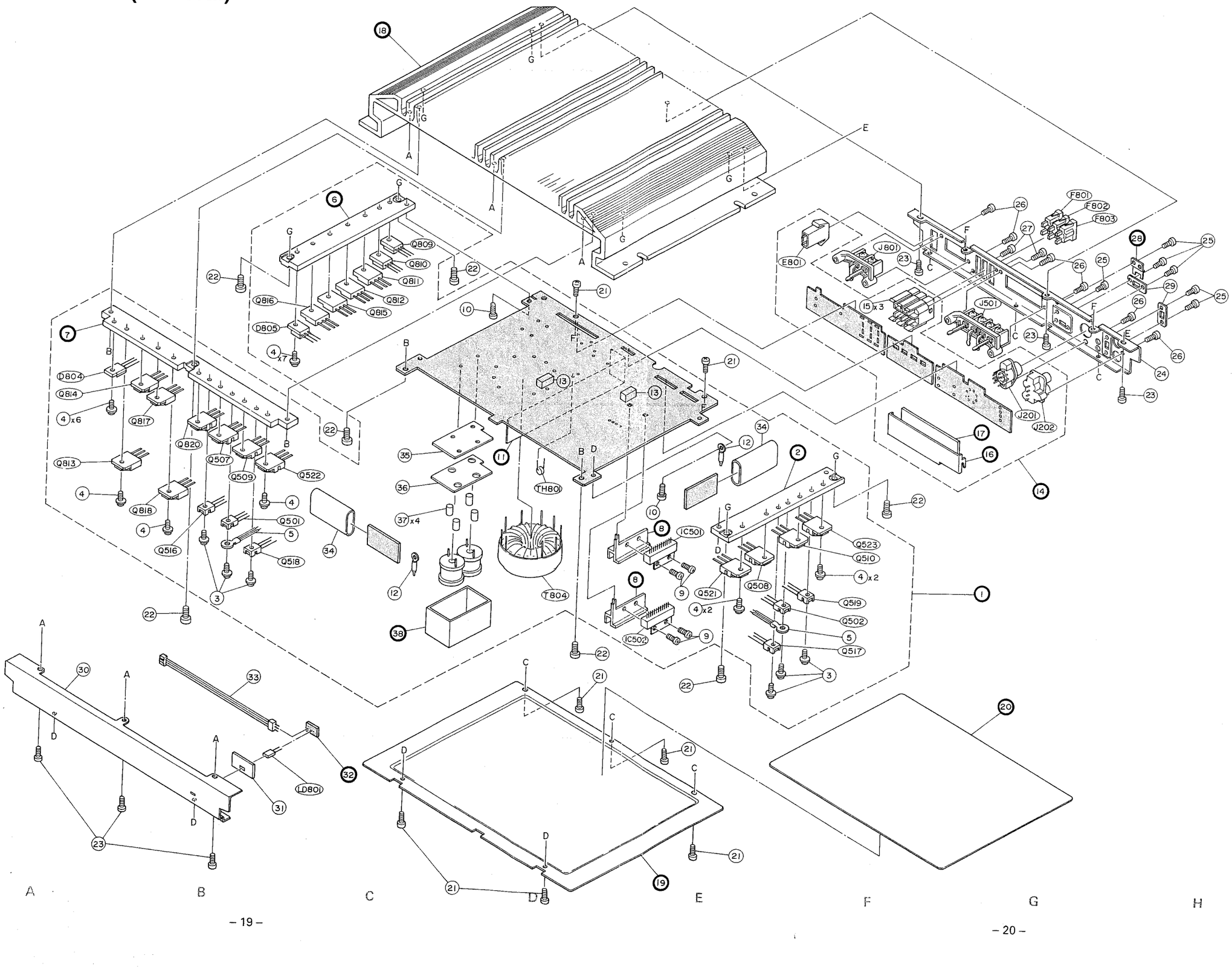


Packing Parts List

Sym-bol No.	Part No.	Description
Packing Assembly Parts		
101	01V73700F38	Assy, Kit Installation
□102	01V73700F39	Assy, Pamphlet
△102	68P73333F12	Owner's Manual
□103	56S69254F57	Carton, PKG. (Individual)
△103	56S69254F78	Carton Packing (Individual)
104	56D73280F01	Tray, PKG. F
105	56B72811F03	Sack, Polyethylene
106	01T73275F01	Assy, Kit Wire (SP)
107	01T73276F01	Assy, Kit Wire Power
108	01T74572F01	Assy, Kit Wire Couple

□ :for North America Model only
△ :for General Export Model only
Others Common

Exploded View (General)



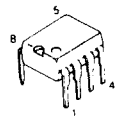
Mechanical Parts List

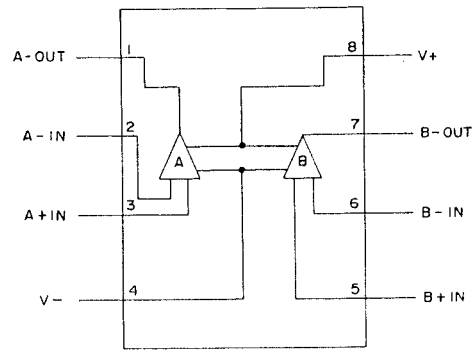
Symbol No.	Index	Part No.	Description
3		03S71252F04	Screw W/D Washer (M3x9)
4		03S71252F05	Screw W/D Washer (M3x10)
5	4B	09T74442F01	Holder TH
9		03S71031F08	Screw Bind (M3x5)
10		03S71031F07	Screw Bind (M3x6)
12	4C,4E	29T80863F01	P Lug
13	3B,3E	75S72374F36	Cushion Rubber
15	3F	09T70751F01	Holder Auto Fuse 1P
21		03S44205G04	Screw, Pan (M3x5)
22		03S63857F39	Screw, Tapping (M3x12)
23		03S63857F36	Screw, Tapping (M3x6)
24	3H	27C73132F01	Chassis Rear 3537
25		03S43997P51	Screw Pan (M2.6x4)
26		03S40012G41	Screw Tapping (M3x8)
27		03S68555F02	Screw Pan (M2x5.5)
29	3H	14A73139F01	Insulator, Switch Lock
30	5A	27C73133F01	Chassis Front 3537
31	6B	15B70599F01	Cover LED
33	5B	01D61220F91	Assy., Connector 3P
34	4C,4E	37T43734F05	Sumi Tube
35	4C	75A81336F01	Cushion Plate
36	4C	26A81335F01	Shield Plate
37	4C	37S43996G01	Silicon Glass Tube

Note: The parts without part numbers are not supplied.

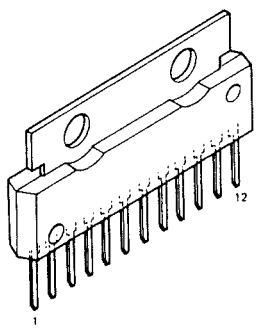
Semiconductors Leads Identifications

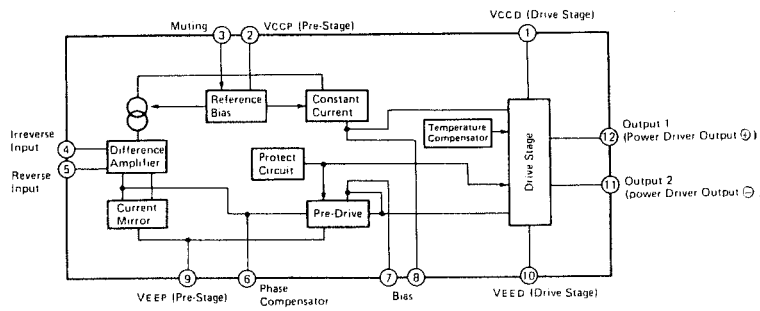
NJM2068D: IC201



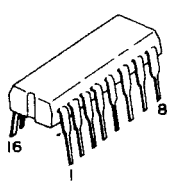


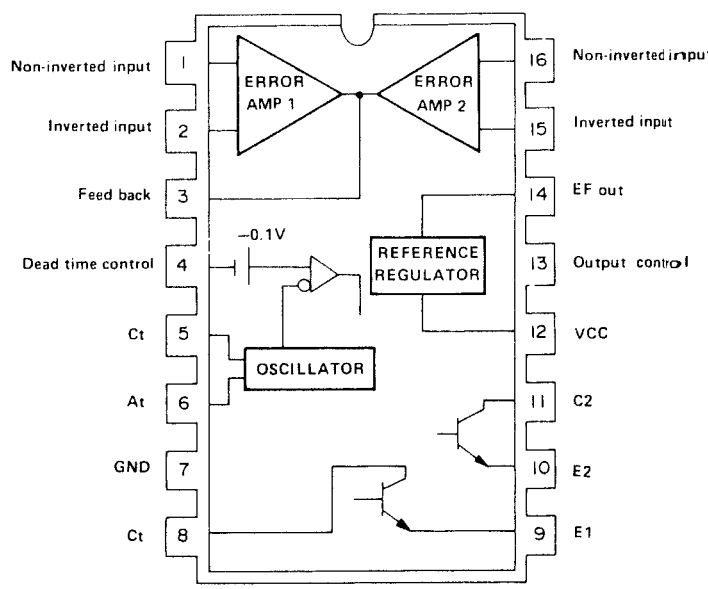
μPC1225H: IC501



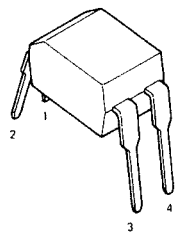


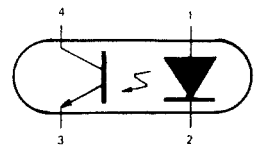
μPC494C: IC801
TL494CN



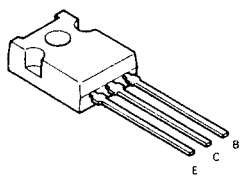


PC2401: IC802

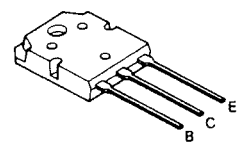




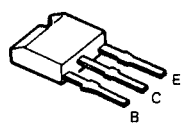
2SC3423: Q501, Q502
2SC3421: Q516, Q517
2SA1358: Q518, Q519, Q801



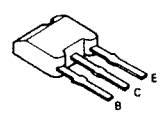
2SC3182: Q507, Q508, Q520, Q521
2SA1265: Q509, Q510, Q522, Q523

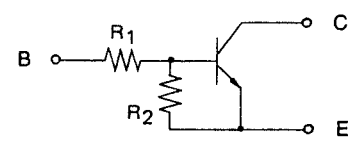


2SC1615: Q503, Q504
2SC2021: Q511, Q512, Q593, Q594,
Q804, Q805, Q806, Q880, Q881

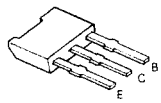


UN1211: Q802

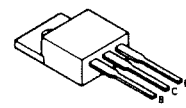




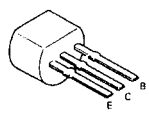
2SB1076M: Q580



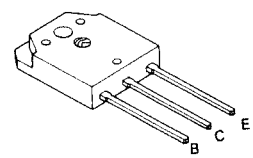
2SC2491: Q809, Q810



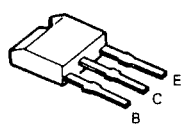
2SD1302: Q590, Q591



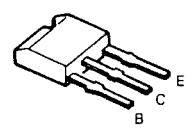
2SD1065: Q811–Q818

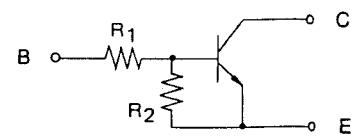


2SA937: Q505, Q506, Q513, Q592, Q803, Q807, Q808

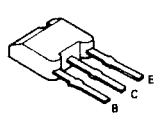


DTC114: Q515

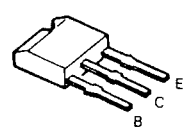


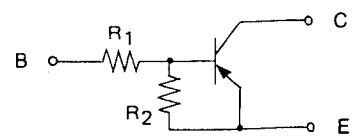


2SD1330: Q514, Q581



DTA114Y: Q582





Schematic Diagram

ICs	IC501 IC502 IC201
Transistors	Q580 Q590–Q592 Q581 Q501–Q506 Q593 Q594 Q516–Q523 Q507–Q
Diodes	D581 D580 D594 D591–D593 ZD590 D595 D511 D501–D504 D505–D508

Voltage Measuring Conditions
- **Power supply voltage:** DC 14.4V
- **Measuring instrument:** Digital multi voltmeter
- **Measuring point reference:**
  Power supply . . . . . Primary GND
  Amplifier . . . . . Secondary GND
- **Measuring conditions:** No signal and initial settings

											IC802					IC801						
Q523	Q507–Q510			Q511–Q515	Q582			Q880 Q881				Q805–Q810 Q801 Q802		Q803	Q811–Q814 Q804			Q815–Q818				
3		ZD201 ZD202			D509		D510	D512	ZD880 D880		ZD803 ZD804	D809	ZD801			D807 D808		ZD802		D804–D806 D801–D803		LD801